

## ABSTRACT

A semiconductor device including a contact pad and  
5 circuit metallization on the surface of an integrated  
circuit (IC) chip comprises a stack of protection layers  
over the surface of the chip. The stack consists of a  
first inorganic layer (303, preferably silicon nitride) on  
the chip surface, followed by a polymer layer (306,  
10 preferably benzocyclobutene) on the first inorganic layer  
(303), and finally an outermost second inorganic layer  
(310, preferably silicon dioxide) on the polymer layer  
(303). A window (301a) in the stack of layers exposes the  
metallization (301) of the IC. A patterned seed metal  
15 layer (307, preferably copper) is on the metallization  
(301) in the window and on the second inorganic layer (310)  
around the window. A buffer metal layer (308, preferably  
copper) is positioned on the seed metal layer (307). A  
metal reflow element (309) is attached to the buffer metal  
20 (308).